

**OHIO ADMINISTRATIVE CODE 1301:7-7-43**  
**UNSTABLE (REACTIVE) MATERIALS**

**(A) SECTION 4301**  
**GENERAL**

**(1) 4301.1 Scope.** The storage and use of unstable (reactive) materials shall be in accordance with this *rule*. Compressed gases shall also comply with *rule 1301:7-7-30 of the Administrative Code*.

**Exceptions:**

1. Display and storage in Group M and storage in Group S occupancies complying with *paragraph (C)(11)(2703.11) of rule 1301:7-7-27 of the Administrative Code*.
2. Detonable unstable (reactive) materials shall be stored in accordance with *rule 1301:7-7-33 of the Administrative Code*.

**(2) 4301.2 Permits.** Permits shall be required as set forth in *rule 1301:7-7-01 of the Administrative Code*.

**(B) SECTION 4302**  
**DEFINITIONS**

**(1) 4302.1 Definition.** The following word and term shall, for the purposes of this *rule* and as used elsewhere in this code, have the meaning shown herein.

**“Unstable (reactive) material.”** A material, other than an explosive, which in the pure state or as commercially produced, will vigorously polymerize, decompose, condense or become self-reactive and undergo other violent chemical changes, including explosion, when exposed to heat, friction or shock, or in the absence of an inhibitor, or in the presence of contaminants, or in contact with incompatible materials. Unstable (reactive) materials are subdivided as follows:

**“Class 4.”** Materials that in themselves are readily capable of detonation or explosive decomposition or explosive reaction at normal temperatures and pressures. This class includes materials that are sensitive to mechanical or localized thermal shock at normal temperatures and pressures.

**“Class 3.”** Materials that in themselves are capable of detonation or of explosive decomposition or explosive reaction but which require a strong initiating source or which must be heated under confinement before initiation. This class includes materials that are sensitive to thermal or mechanical shock at elevated temperatures and pressures.

**“Class 2.”** Materials that in themselves are normally unstable and readily undergo violent chemical change but do not detonate. This class includes materials that can undergo chemical change with rapid release of energy at normal temperatures and pressures, and that can undergo violent chemical change at elevated temperatures and pressures.

**“Class 1.”** Materials that in themselves are normally stable but which can become unstable at elevated temperatures and pressure.

**(C) SECTION 4303**  
**GENERAL REQUIREMENTS**

**(1) 4303.1 Quantities not exceeding the maximum allowable quantity per control area.** Quantities of unstable (reactive) materials not exceeding the maximum allowable quantity per control area shall be in accordance with *paragraphs (C)(1)(a)(4303.1.1) to (C)(1)(b)(v)(4303.1.2.5) of this rule*.

**(a) 4303.1.1 General.** The storage and use of unstable (reactive) materials in amounts not exceeding the maximum allowable quantity per control area indicated in *paragraph (C)(1)(2703.1) of rule 1301:7-7-27 of the Administrative Code* shall be in accordance with *paragraphs (A)(2701) and (C)(2703) of rule 1301:7-7-27 of the Administrative Code* and *paragraphs (A)(4301) and (C)(4303) of this rule*.

**(b) 4303.1.2 Limitations for indoor storage and use by occupancy.** The indoor storage of unstable (reactive) materials shall be in accordance with *paragraphs (C)(1)(b)(i)(4303.1.2.1) to (C)(1)(b)(v)(4303.1.2.5) of this rule*.

**(i) 4303.1.2.1 Group A, E, I or U occupancies.** In Group A, E, I or U occupancies, any amount of Class 3 and 4 unstable (reactive) materials shall be stored in accordance with the following:

- (a) Class 3 and 4 unstable (reactive) materials shall be stored in hazardous material storage cabinets complying with *paragraph (C)(8)(g)(2703.8.7) of rule 1301:7-7-27 of the Administrative Code*.
- (b) The hazardous material storage cabinets shall not contain other storage.

**(ii) 4303.1.2.2 Group R occupancies.** Class 3 and 4 unstable (reactive) materials shall not be stored or used within Group R occupancies.

**(iii) 4303.1.2.3 Group M occupancies.** Class 4 unstable (reactive) materials shall not be stored or used in retail sales portions of Group M occupancies.

**(iv) 4303.1.2.4 Offices.** Class 3 and 4 unstable (reactive) materials shall not be stored or used in offices of Group B, F, M or S occupancies.

**(v) 4303.1.2.5 Classrooms.** In classrooms in Group B, F or M occupancies, any amount of Class 3 and 4 unstable (reactive) materials shall be stored in accordance with the following:

- (a) Class 3 and 4 unstable (reactive) materials shall be stored in hazardous material storage cabinets complying with *paragraph (C)(8)(g)(2703.8.7) of rule 1301:7-7-27 of the Administrative Code*.
- (b) The hazardous material storage cabinets shall not contain other storage.

## UNSTABLE (REACTIVE) MATERIALS

(2) **4303.2 Quantities exceeding the maximum allowable quantity per control area.** The storage and use of unstable (reactive) materials in amounts exceeding the maximum allowable quantity per control area indicated in *paragraph (C)(1)(2703.1) of rule 1301:7-7-27 of the Administrative Code* shall be in accordance with *rule 1301:7-7-27 of the Administrative Code* and this rule.

### (D) SECTION 4304 STORAGE

(1) **4304.1 Indoor storage.** Indoor storage of unstable (reactive) materials in amounts exceeding the maximum allowable quantity per control area indicated in Table 2703.1.1(1) of *rule 1301:7-7-27 of the Administrative Code* shall be in accordance with *paragraphs (A)(2701), (C)(2703) and (D)(2704) of rule 1301:7-7-27 of the Administrative Code* and this rule.

In addition, Class 3 and 4 unstable (reactive) detonable materials shall be stored in accordance with the *building code as listed in rule 1301:7-7-45 of the Administrative Code* requirements for explosives.

(a) **4304.1.1 Detached storage.** Storage of unstable (reactive) materials shall be in detached buildings when required in *paragraph (C)(8)(b)(2703.8.2) of rule 1301:7-7-27 of the Administrative Code*.

(b) **4304.1.2 Explosion control.** Indoor storage rooms, areas and buildings containing Class 3 or 4 unstable (reactive) materials shall be provided with explosion control in accordance with *paragraph (K)(911) of rule 1301:7-7-09 of the Administrative Code*.

(c) **4304.1.3 Liquid-tight floor.** In addition to *paragraph (D)(12)(2704.12) of rule 1301:7-7-27 of the Administrative Code*, floors of storage areas for liquids and solids shall be of liquid-tight construction.

(d) **4304.1.4 Storage configuration.** Unstable (reactive) materials stored in quantities greater than 500 cubic feet (14 m<sup>3</sup>) shall be separated into piles, each not larger than 500 cubic feet (14 m<sup>3</sup>). Aisle width shall not be less than the height of the piles or 4 feet (1219 mm), whichever is greater.

**Exception:** Materials stored in tanks.

(e) **4304.1.5 Location in building.** Unstable (reactive) materials shall not be stored in basements.

(2) **4304.2 Outdoor storage.** Outdoor storage of unstable (reactive) materials in amounts exceeding the maximum allowable quantities per control area indicated in Table 2703.1.1(3) of *rule 1301:7-7-27 of the Administrative Code* shall be in accordance with *paragraphs (A)(2701), (C)(2703) and (D)(2704) of rule 1301:7-7-27 of the Administrative Code* and this rule.

(a) **4304.2.1 Distance from storage to exposures Class 4 and 3 (detonable) materials.** Outdoor storage of Class 4 or 3 (detonable) unstable (reactive) material shall be in accordance with Table 3304.5.2(2) of *rule 1301:7-7-33 of the Administrative Code*. The number of pounds of material listed in the table shall be the net weight of the material pres-

ent. Alternatively, the number of pounds of material shall be based on trinitrotoluene (TNT) equivalent weight.

(b) **4304.2.2 Distance from storage to exposures Class 3 (deflagratable) materials.** Outdoor storage of deflagratable Class 3 unstable (reactive) materials shall be in accordance with Table 3304.5.2(3) of *rule 1301:7-7-33 of the Administrative Code*. The number of pounds of material listed shall be the net weight of the material present.

(c) **4304.2.3 Distance from storage to exposures Class 2 and 1 materials.** Outdoor storage of Class 2 or 1 unstable (reactive) materials shall not be located within 20 feet (6096 mm) of buildings not associated with the manufacture or distribution of such materials, lot lines, public streets, public alleys, public ways or means of egress. The minimum required distance shall not apply when fire barriers without openings or penetrations having a minimum fire-resistance rating of 2 hours interrupt the line of sight between the storage and the exposure. The fire barrier shall either be an independent structure or the exterior wall of the building adjacent to the storage area.

(d) **4304.2.4 Storage configuration.** Piles of unstable (reactive) materials shall not exceed 1,000 cubic feet (28 m<sup>3</sup>).

(e) **4304.2.5 Aisle widths.** Aisle widths between piles shall not be less than one-half the height of the pile or 10 feet (3048 mm), whichever is greater.

### (E) SECTION 4305 USE

(1) **4305.1 General.** The use of unstable (reactive) materials in amounts exceeding the maximum allowable quantity per control area indicated in Table 2703.1.1(1) or 2703.1.1(3) of *rule 1301:7-7-27 of the Administrative Code* shall be in accordance with *paragraphs (A)(2701), (C)(2703) and (D)(2705) of rule 1301:7-7-27 of the Administrative Code* and this rule.

Effective Date: July 1, 2007

Prior Effective Dates: 7/1/79; 6/1/85; 6/15/92; 7/1/93; 9/1/95; 3/30/98; 9/1/05